

REMARKS

I. Restriction Requirement

The Examiner has required restriction to one of either claims 1-16, drawn to a check valve or claims 17-27, drawn to a support and method of supporting a check valve. Applicant hereby elects claims 1-16 for prosecution at this time in connection with the instant application with traverse. Claims 17-27 have been cancelled, as drawn to a non-elected invention.

II. Rejections Under 35 U.S.C. § 112

The Examiner objected to claim 12 as indefinite for failing to particularly point out and distinctly claim the invention. Particularly, the Examiner indicated that "said support plate" in line 1 of claim 12 lacked antecedent basis. As discussed in more detail below, the subject matter of claim 12 has now been incorporated in claim 1. Claim 12 is thus cancelled, rendering the § 112 rejection moot.

III. Substantive Rejections

The Examiner rejected claims 1-3, 6-11, 13 and 15 under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,931,197 to Raftis et al. The Examiner also rejected claims 1, 3-8, 10, 12, 14, and 16 under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 187,411 to Painter. Finally, the Examiner rejected claims 4, 5, 12, 14, and 16 under 35 U.S.C. § 103(a) as obvious over Raftis et al. in view of Painter. In light of the above amendments and following remarks, Applicant respectfully requests withdrawal of these rejections.

Raftis et al. discloses an asymmetrical check valve which, in a certain embodiment, includes a support plate 54 with an extending rod 52, as shown in Figs. 5 and 6.

Painter discloses a pump valve having braces *e* and *f* secured to the inside and outside of the pump valve, as shown in Fig. 4.

By contrast, amended claim 1 now requires a large diameter check valve (i.e., 20 inches in diameter or greater) having an embedded support plate, which support plate has a plurality of bonding holes therein and at least one reinforcing rib on the support plate. Furthermore, the support plate has a size and contour which is similar to an upper portion of at least the inlet part and the transition part of the check valve. Both Raftis et al. and Painter teach away from the invention as now claimed, in many respects.

First, Raftis et al. does not include a plurality of bonding holes in the support plate. The support plate includes bonding holes to more reliably secure the plate within the thickness of the check valve, during the vulcanization process. Furthermore, the plate 54 in Raftis et al. does not have a size and contour similar to an upper portion of both the inlet part and the transition part of a check valve. On the contrary, the plate 54 in the preferred embodiment described in Raftis et al. is located only within the inlet part.

Painter specifically teaches and discloses locating the braces *e*, *f* on the interior and exterior surfaces of a valve. Furthermore, there is no teaching or suggestion for a reinforcing rib or for bonding holes on the braces *e* and *f* of Painter. To the contrary, there would be no need for such bonding holes in Painter, since its braces are not imbedded and the braces are instead attached via rivets.

Embedding the support plate, as now required by claim 1, provides the important added advantage of protecting the plate from highly corrosive environments, such as wastewater passing through the interior of the check valve.


Application No. 10/628,041
Paper Dated: April 28, 2005
In Reply to USPTO Correspondence of April 19, 2005
Attorney Docket No. 4721-031125

The invention as now claimed is thus deemed patentable over Raftis et al. and/or Painter. Removal of the rejections and allowance of the remaining claims is therefore requested.

Respectfully submitted,

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